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XXXI.—*On the different Animals known as Wild Asses.*

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AT least four distinct species—if the Dshiggital or Kyang (*Equus hemionus* of Pallas) be considered to differ specifically from the Koulan or Ghor-khur (*E. onager* vel *E. asinus onager* of Pallas)—have been confounded under the general denomination of “wild Asses;” and two of the four have likewise been designated “wild Horses”—a name to which they are less entitled, as all agree in exhibiting the few structural distinctions that characterize the Asinine sub-group apart from the Equine or Caballine.

The systematic names bestowed by Pallas are so far unfortunate that they do not apply to the particular species which were known by them to the ancient Greeks and Romans—one of which latter has only recently been discriminated by Professor Isidore Geoffroy St.-Hilaire, by the name *Equus hemippus*. This (from its habitat) is necessarily the *Hemionus* vel *Hemippus*, or “wild Mule” of the ancients; whilst their *Onager*, as the name implies, refers as clearly to the veritable wild *E. Asinus*, which to this day, as formerly, exists in numerous troops in north-east Africa, if not also in the southern parts of Arabia and the island of Socotra. The *Hemippus* of modern nomenclature is the representative of the present group in Syria, Mesopotamia, and the northern portion of Arabia, where it is designated by Col. Chesney the “wild Horse,” as distinguished from his “wild Ass” of Southern Arabia; and it is the species figured in Wagner’s ‘Säugethiere’ (1856), pl. 33, by the erroneous name of *Equus asinus onager* of Pallas, from a living individual formerly in the Knowsley menagerie.

It should be especially noted that the great naturalist Pallas described his *E. hemionus* from personal observation of the ani-

\* From the Journal of the Asiatic Society of Bengal, 1859.

mal; whereas he describes his *E. onager* only at second-hand, having never seen a specimen. Had he personally inspected the latter, it is exceedingly doubtful if he would have recognized the two as distinct species, or have considered the western animal to be the real *Onager* or aboriginal wild Ass. In his account of the Dshiggitai he remarks:—"On ne doit pas le confondre avec l'âne des steppes nommé Koulan par les Kirguis occidentaux; les détails que je me suis procurés sur ce dernier m'ont convaincu qu'il étoit l'âne sauvage, l'Onagre des anciens. Le Koulan se tient par troupeau dans les landes montagneuses de la Tatarie occidentale, comme le Dshiggitai dans les déserts de la Mongolie\*." Curiously enough, we at present know the Dshiggitai or Kyang more as a mountain animal, in the elevated wilds of Tibet, and the Koulan or Ghor-khur more as an inhabitant of the sandy desert.

The late Professor H. Walker referred the Tibetan Kyang to *Equus hemionus* of Pallas; and the Ghor-khur of this country is even more satisfactorily referable to *E. onager* of Pallas, figured by Gmelin; but Professor Walker committed the extraordinary mistake of figuring and describing an Indian Ghor-khur for a Kyang†, so that the alleged distinctions which he has pointed out are valueless. However this mistake originated, there is no doubt whatever of the fact. The animal was procured and sent down to Calcutta by the late Mr. Thomason, Governor of the N. W. Provinces, who was just in the position to obtain a Ghor-khur from the western deserts, but scarcely a Tibetan Kyang. No doubt it was sold to him as a Puháriá or "mountain" Ghor-khur; for this epithet is continually applied by the natives of India to any creature foreign to their own province, as the experience of readers who have been in the habit of purchasing animals in this country will readily testify. By what route it reached Mr. Thomason we are uninformed, as also how it came to be accompanied by a Himalayan pony, from which it was inseparable; but having compared Dr. Walker's figure and description with stuffed specimens of undoubted Kyangs, and with three living undoubted Ghor-khurs now in Calcutta, the conclusion here arrived at is irresistible.

\* Voyages de Pallas, iv. p. 305 (French edition, 1793). In p. 309 I observe a statement which is worthy of especial notice, as being made by Professor Pallas. The existence of the pouch of the Great Bustard (*Otis tarda*) is denied by Professor Owen, though asserted by the Hon. Walter Elliot to be a characteristic of the Great Bustard of India (*Eupodotis Edwardsii*). Of the former, however, Pallas thus writes: "Cet animal a un petit trou sous la langue, qui sert d'ouverture à une bourse aqueuse, qui est de la grosseur d'un œuf d'oie, et qui pèse souvent plus de trente livres. On ne connoît point ici la Petite Outarde."

† Journ. Asiat. Soc. xvii. pt. 2. p. 1, pl. 1.

While identifying the Kyang with the Dshiggitai, however, Professor Walker little imagined that he was making the same mistake that he considered M. Frédéric Cuvier and others to have done, in referring the Ghor-khur also to *E. hemionus*. I find that the Ghor-khur accords to the minutest particular with the Koulan or *E. onager* of Pallas, figured by Professor Gmelin from an occasional variety bearing a short humeral stripe (which is not rare also in Indian specimens of either sex\*), from the presence of which the identity of this animal with the true Ass has been generally, but erroneously, inferred. Of the two individuals then at St. Petersburg, which are described by Professor Gmelin, it may be remarked that his male only had the shoulder-stripe, and his female not a trace of it; and he was informed that individuals had been seen with a second shoulder-stripe. This I have myself observed in the domestic Ass, and even a third and fourth, more or less developed—the additional ones being of variable length, and given off along the back as far as the loins,—though it is very rarely that more than a single stripe occurs, and I have seen only one domestic Ass without the shoulder-stripe. Many of our Indian donkeys have also well-defined transverse bars on the limbs, which are permanent for life (not, as described by Professor T. Bell, peculiar to the foal); they are often black and strongly contrasting, placed rather distantly apart, and they vary much in length. It is remarkable that some races of horses also have the same markings. The well-known “eel-back dun” of England is so named from its black dorsal stripe bearing a supposed resemblance to an eel; the Indian Káttyáwar (or rather, Cutch Horse) has generally, in addition, the shoulder-stripe and Zebra-markings on the limbs black and very distinct and conspicuous; and the same may be observed of many of the Shán ponies from the independent states north of Burma, many of which are brought annually to Maulmein, and not a few thence to Calcutta. I have seen one of these, of the pale drab colour usual in the Ass, with the cross and the stripes on the limbs deep black and most conspicuous, the dorsal stripe being continued down the tail just as in the *Asinine* series; yet in all other respects it was a handsome robust pony, with copious equine mane and tail, showing no approximation whatever to the *Asinine* group in its structure or voice. Those who believe that the domestic Horse is a compound species derived from a plurality of aboriginal races may

\* Jacquemont notices such a specimen, which he saw in Barrackpore Park (Voyage dans l'Inde, i. 170; *vide* also Journ. Asiat. Soc. xxvi. 240). In Pallas's 'Zoographia Rosso-Asiatica,' which I have seen since penning the above, there is a coloured figure of *E. onager*, but much too rufous in the particular copy to accord with the description.

well infer that they perceive, in the markings described, indications of certain of those races\*.

In some examples of the Ghor-khur (as that figured by Dr. Walker, from a drawing from life by Dr. Cantor†), there are no traces whatever of markings on the limbs; others show slight traces, more or less distinct, chiefly at the joints; and others, again, have the entire limbs strongly marked: but the stripes do not resemble those often seen in domestic donkeys, or in the races of Horse referred to; in general they are wavy lines of fawn, often more or less crossed or reticulate, but in some more regular and Zebra-like, upon observing which I remembered the description in Bell's 'Travels in Tartary' (i. p. 224) of the "wild Asses" found in the country of the Tzulimm Tartars, "the hair of which is waved, white and brown, like that of a tiger:" he "had seen many of their skins." So far as the limbs are concerned, this description is quite intelligible with reference to many Indian examples of the Ghor-khur.

It would appear that these limb-markings are never seen in the Kyang; but a narrow black ring adjoining the hoof would seem to be constant in this animal, as was first pointed out to me by Major Robert C. Tytler, the proprietor of the three Ghor-khurs now in Calcutta. This mark is also more or less developed in the Ghor-khur, but is by no means conspicuous in either race. In two stuffed specimens of the Kyang, old and young, in the Society's museum, there is no black shoulder-stripe, but in place of it the coat is there distinctly of a deeper shade of hue, so that the stripe is faintly indicated, as is best seen from a moderate distance. The same is observable, when especially looked for, in an unmounted skin. In one only of Major Tytler's three Ghor-khurs there is a small narrow black

\* It does not follow, because the hybrid offspring of the Horse and Ass is mostly infertile (the male mule perhaps always), that distinct species of the Equine or Caballine group, or of the Asinine group, respectively, should not produce a prolific intermediate race, hybrid with hybrid. In the London Zoological Gardens there was formerly a triple hybrid, the sire of which was a Quagga, and the dam a cross between the Ass and Zebra.

The curious animal figured by Col. C. H. Smith, in his volume on the *Solidungula* in the 'Naturalist's Library,' under the name *Asinus hippagrus* (vel *equuleus*), appears to me to be a Chinese *hinny*, or offspring of the Horse and she-Ass. Its stripes might have been derived from either parent, if not (and very probably) from both of them. Col. Smith also figures what he terms an "eel-back dun" from the Ukraine, with the humeral cross-stripe, but no limb-markings; in the text, however, he repeatedly alludes to those markings as occurring sometimes in the "eel-back dun" race.

† Journ. Asiat. Soc. xvii. pt. 2. p. 1, pl. 1. This published figure is bad, whatever the drawing may have been. There is no anatomy about it, and the grace and beautiful contour of the creature are not at all portrayed. The head in particular, and the haunch, are exceedingly ill-represented.

line, on one side only of the animal, where the cross occurs in some individuals. In another Ghor-khur, which I saw in the Surrey Zoological Gardens, there was an incipient cross-stripe about an inch long, on one side, and still less (the merest indication of it) on the other side. In the individual which Jacquemont saw in Barrackpore Park, he remarks that there was "une ligne noire transversale sur les épaules." Whether this cross-stripe is ever seen in the *Hemippus* remains to be ascertained.

Sir R. Kerr Porter describes a "wild Ass" without even the dorsal stripe; and as he completed his sketch of it from a second individual which he killed, our incredulity should therefore abate somewhat, even though his account remains uncorroborated to this day. All other observers seem to agree in describing the Persian wild Ass to have the usual longitudinal dorsal streak. Thus in Morier's 'Second Journey through Persia' (ii. p. 201) we read, "The wild Ass is of a light mouse-colour, with a dark streak over its shoulder and down its back," which may imply that a cross-stripe was also observed. Porter, however, states, "The mane was short and black, as was also a tuft which terminated his tail; no line whatever ran along his back, or crossed his shoulders, as are seen in the tame species." Such an animal does not appear to have been met with by any other person! Prof. St.-Hilaire suspects that it will yet prove to be a distinct species. As an example of the vague misuse of names in which many authors indulge, it may here be remarked that in Kinneir's 'Geographical Memoir of the Persian Empire' (p. 42) these animals are actually styled "Zebras or wild Asses!"

The voice of Major Tytler's Ghor-khurs is a loud, shrieking bray. It is decidedly different from that of an animal which I heard in the Zoological Gardens, Regent's Park, which also was a distinct bray, but much less harsh and discordant than that of a donkey. This animal was probably a *Hemippus*; and Prof. Is. St.-Hilaire remarks that the voice of the *Hemippus* is notably different from that of the "Hémione," meaning the Ghor-khur. Also that "le braire de nos Hémiones indiens, si l'on veut se servir pour eux de ce mot, diffère considérablement du braire de l'Ane, soit domestique, soit sauvage\*." When and where the distinguished Professor heard the bray of the wild Ass does not appear on the record; but the probability is that it differs little, if at all, from that of the domestic animal.

The Kyang, according to Major A. Cunningham, "neighs like a horse;" and I suspect that it was upon his authority that Dr. Walker asserted the same, and that he had never heard the

\* Comptes Rendus, December 31, 1855, p. 1224.

voice of the Ghor-khur which he described. Again, M. Huc remarks of the Kyang's voice, that "le hennisement qu'ils font entendre est vibrant, clair et sonore\*." On the other hand, Moorcroft asserts that "his cry is more like braying than neighing †;" and in an admirable letter, signed "Norman Leslie," which appeared in a late No. of the 'Friend of India' newspaper, giving an account of a Tibetan tour and of the sport obtained in the course of it (including the "bagging" of a noble specimen of the wild Yak), the following passage occurs relative to the Kyang, which is well worthy of citation:—

"As the spectator stands on the elevated land by the watershed, he sees to the north the course of the Sutlej running from east to west through a table-land which is 14,000 feet high and intersected with ravines; the Himalayas to the south look but an ordinary range of hills, scarcely so elevated in appearance as the range beyond the Sutlej which bounds the view, and in which to the eastward the peak of Kylas rises conspicuous. On the plains between the ravines herds of Kyang feed; they are more *asinine* than *equine* in appearance, are of a light red colour, with white belly and legs, and have the hog-mane stripe down the back, and tail of an ass; the head is disproportionately large; and *they bray instead of neighing.*"

I have also been assured by actual observers, familiar with the voice of the Kyang, that it is "as much like neighing as braying;" but this I do not comprehend. It must surely be either one or the other. A *neigh* is a tremulous expiration only; a *bray* consists of alternate expirations and inspirations. And there can be little doubt that the Kyang will prove to resemble the other asinine quadrupeds in braying and not neighing, notwithstanding the highly respected testimony of Major Cunningham †.

The resemblance of the two animals is indeed exceedingly close, again notwithstanding the assertion to the contrary by Major Cunningham, Dr. Hooker, and others—greater even than that of either of them to the *Hemippus*, which has a conspicuously smaller head and shorter ears. The size and figure of the two

\* Souvenirs d'un Voyage dans la Tartarie, le Thibet, et la Chine, ii. 221.

† Moorcroft's Travels, i. 443.

‡ I have never heard the voice of the Quagga from which that species derives its name. That of the Ghor-khur is considered by Major Tytler to resemble exceedingly the cry of a mule. The truth might, indeed, be anatomically determined. Thus Cuvier remarks of the Ass: "Sa voix rauque (appelée *braire*) tient à deux petites cavités particulières du fond de son larynx." (R. A. i. 253.) Pennant, following Pallas, remarks of the Tshiggetai, that "their *neighing* is deeper and louder than that of the Horse,"—a description which most assuredly cannot be reconciled with the *shrieking bray* of the Ghor-khur.

would seem to be absolutely alike, with a heavy but well-formed head, longish ears, rather a short neck, and body and limbs of exquisite *tournure*, indicative of extraordinary fleetness. I have not seen the living Kyang or Djiggetai; but the croup is distinctly higher than the withers in the living Ghor-khur or Koulai. The colour of the Kyang is much deeper and more rufous than that of the Ghor-khur, and there is considerably more of white about the latter. The Ghor-khur is of the isabelline or sandy hue of most animals of the desert, but with a distinct rufescent tinge; its dorsal stripe would seem to be generally much broader than in the Kyang, though varying in breadth in different individuals; but it may be remarked that this stripe varies much in width in the domestic Donkey, at least in the diminutive Indian race of Asses, being in some individuals of the latter quite as broad as in any Ghor-khur: this mesial stripe, however, seems to be broader down the tail in the Kyang, and is continued down to the black terminal tuft; whereas in the Ghor-khur (perhaps with exceptions) the line is narrow on the tail, and terminates at some distance above the tuft. Again, in the Ghor-khur the dorsal stripe (which in both is of a dark chocolate-colour rather than black) is more or less conspicuously bordered with white (as likewise in the *Hemippus*), and this white extends broadly and very conspicuously towards the tail and along the hind margin of the buttocks, where, in the Kyang (as also, I since find, in some Ghor-khurs), the hue of the upper parts is only moderately diluted. Again, there is a much stronger tendency in the Ghor-khur for the white of the under parts to extend upwards from the flanks, in some so much as to join that bordering the broad dorsal streak, thus insulating the isabelline hue of the haunch; and the zebra-markings of the limbs, common (though not invariably present) in the Ghor-khur, have been denied to be ever traceable in the Kyang, and they certainly are not so in three skins of the latter under examination. In conformity with the general tendency to the extension of the white, as before remarked, that of the muzzle also reaches higher in the Ghor-khur than in either the Kyang or *Hemippus*; and lastly, the humeral cross, when apparent, shows itself differently, being faintly visible in full development and placed very forward in the Kyang, while in the Ghor-khur, when it does occur, it is a black cross more or less developed, though never probably to so great an extent as in the true Ass.

Moorcroft, alluding to the Quagga, remarks that the Kyang is "without stripes" (evidently meaning such as the Quagga exhibits), "except a reported one *along each side of the back to the tail*. These were distinctly seen in a foal, but were not distin-

guished in adults\*." In the Asiatic Society's stuffed specimens, especially when viewed from some distance, the dull ruddy-brown or rufous-chestnut hue (approaching to bay, especially on the head) of the upper parts becomes gradually but distinctly darker on the flanks, to where it abruptly contrasts with the white of the belly; and in an adult the jowl and sides of the neck are white, reaching nearly up to the mane at the setting-on of the head, whence the brown above gradually widens backward to the shoulder; the white of the under parts also ascends above the *elbow-joint*, and posterior to the very dull indication of the shoulder-cross, which is not darker than where the body-hue contrasts with the white of the flanks. The stuffed foal is generally a trifle darker, and a little different in the relative extension of its shades,—the dorsal stripe being also less sharply defined, though only in consequence of the hair being longer. No doubt individuals vary more or less, like individual Ghor-khurs.

Comparing the hoofs together, the only difference that I can perceive consists in the fact that the Kyang-skins before me are those of *wild* animals, with the hoofs duly worn by constant action; whereas those of a Ghor-khur, belonging formerly to a captive individual, are much less worn, and accordingly are not so shapely. The limb-bones present no difference whatever. In the skulls the only diversity that I can perceive may be fully accounted for by disparity of age. We have the skull of a mature female Kyang, with its last molars long in wear; and this corresponds with Major Cunningham's figures of the skull of a male Kyang†. With these I compare that of an adolescent male Ghor-khur, with the penultimate molars just coming into wear, the last being enclosed within their sockets, the two foremost deciduary præmolars (on each side above and below) about to be replaced, and a medial pair of permanent incisors (above and below) just passing through the gums. A Horse at this stage of development would be reckoned as  $2\frac{1}{2}$  years old. At this particular age, I can perceive no further difference than can be accounted for by incomplete development on the part of the immature Ghor-khur‡.

Having thus elaborately compared them, it is impossible to

\* Travels in the Himalayan Provinces, i. 443.

† Ladák, &c., pl. 6, p. 195.

‡ Since the above was in type, the Asiatic Society has received from Major Lumsden, late in charge of the Kandahar Mission, an imperfect skin and a skull of an adolescent male Ghor-khur from the vicinity of Kandahar. Its last molars were just coming into wear, corresponding to about four years old in the Horse. The skin shows the short summer vesture, and is of the same cream-colour or light isabelline hue as Major Tytler's three living specimens—the true *desert colouring*; and this hue



agree with Dr. J. D. Hooker when he asserts that the Kyang "differs widely from the 'wild Ass' of Persia, Sindh, and Beluchistan," although "undoubtedly the same as the Siberian animal." He adds that "it resembles the Ass more than the Horse, from its size, heavy head, small limbs, thin tail, and the stripe over the shoulder [!]. The flesh is eaten, and much liked. The Kyang-lah mountains are so named from their being a great resort of this creature\*." Trebeck's remarks on the figure of the Kyang, as quoted by Cunningham, apply alike to either race. The accomplished botanist cited would most assuredly not recognize as distinct species two plants from different regions which differed so very slightly from each other as the Ghor-khur and the Kyang differ in the animal kingdom. Indeed, so far as I can discover, the difference is only in colouring, and this merely a difference of shades of hue and the relative extension of them †!

suffuses the caudal region, which in Major Tytler's animals is conspicuously much whiter: the mesial dark line is very slight, almost evanescent, down the tail, in which respect all the Ghor-khurs differ from all the Kyangs under examination; and this stripe is not broader upon the croup than in an ordinary Donkey: there are no traces of markings on the limbs. The skull is unfortunately abnormal, being unsymmetrical and curiously deviating from the straight line—to the left at the occiput, and to the right at the muzzle. The nasal bones are more compressed than in the Kyang-skull; but this difference does not exist in Major Tytler's younger Ghor-khur-skull, nor certainly in his three living animals, so far as a judgment can be formed on careful examination of them. There is an obvious deformity in the shape of the lower jaw, the rami of which approximate almost to contact underneath for a considerable portion of their length, and not quite symmetrically.

The only equine skull in the Calcutta Medical College is catalogued as that of a Horse; but it exhibits the true *asinine* contour, and is nearly as large as that of the adult Kyang. I do not think that it is a mule-skull, but rather that it belonged to a fine specimen of the large Levantine race of domestic Asses, which is occasionally met with in the north-west of India, chiefly beyond Delhi. Had it been the skull of a wild animal, it would probably have been registered as such; and moreover, as a general rule, there is a considerable quantity of dark incrustation on the teeth of wild grazing animals, which I think is never very observable on those of domestic beasts: in the present instance, this is exhibited by the skull of a wild Kyang and that of a wild Ghor-khur under examination, and in no skull of domestic Horse or Ass, nor in the dubious Medical College specimen.

\* Himalayan Journal, ii. 172.

† *Vide* a subsequent notice of the Ghor-khur, p. 242, where individuals are noticed of a *very dark colour!* But the Dshiggetai, as described by Pallas and Pennant, does not quite satisfactorily agree in colouring with the Tibetan Kyang! "Le poil est d'un jaune rembruni, assez clair. Le nez et l'intérieur des membres sont d'un jaune roux" (Pallas, Voyage). Pennant also, translating from the German, writes: "The colour of the upper parts of the body a light yellowish-grey, growing paler towards the sides. *Buttocks white*, as are the inside of the limbs and belly." This colouring really applies better to the Ghor-khur.

As regards the geographical distribution of the Kyang or Djiggetai, it does not appear that aught has been added to our knowledge since the time of Pallas; and the same may be remarked of the distribution of the Ghor-khur or Koulan, excepting that the proper habitat of the *Hemippus* has to be subtracted from that of the Koulan, and the supposed migratory habits of the latter are not confirmed by subsequent observation. In the depth of a Khiva winter, this animal was observed in numerous herds near the western extremity of Lake Aral, by Major James Abbott, who remarks that he "ascended some high land covered with snow. Wind scarcely endurable. We every day see herds of wild Asses, and flocks of the Saiga Antelope. I counted 800 wild Asses in a single herd\*." According to Lieut. Irwin, it is "common in Persia, the western parts of Khorassân, and the plains of Turkistân, from which he extends north into the Russian dominions and the centre of Asia. A few are kept by the Ymacks, more for curiosity than use†." Southward, they are still numerous in the parched and rugged deserts of Beluchistân, which, however, are scarcely hotter than the country about the Aral in summer: there are many of them in the *Pât* or desert between Asni and the hills, west of the Indus, above Mithur-kote. "In this desert," remarks a recent writer, "they are to be found wandering pretty well throughout the year; but in the early summer, when the grass and the water in the pools have dried up from the hot winds (which are here terrific), the greater number (if not all) of the Ghor-khurs migrate to the hills for grass and water. Some are probably to be found in the hills throughout the year, for among them are sandy plains of greater or less extent. The foaling season is in June, July, and August, when the Beluchis ride down and catch numbers of foals, finding a ready sale in the cantonments for them, as they are taken down on speculation to Hindustan. They also shoot great numbers of full-grown ones for food, the ground in places in the desert being very favourable for stalking. . . . Some are beautifully striped on the legs; many are mottled. *I have seen one or two of a very dark colour.* They have not generally the stripe on the shoulder, though I think I have seen some with it slightly marked‡." Eastward of the Indus, this animal appears to be fast verging on extermination; and I am assured that one herd only is left in the Bikânir desert, where the foals are often run down; and Major Tytler's specimens are from this locality. There are still a few also in the Runn of Cutch§. "The wild

\* Narrative of a Journey from Herat to Khiva, &c., i. 23.

† Journ. Asiat. Soc. viii. 1008.

‡ India Sporting Review, n. s. iii. 172.

§ From information obtained by Major Tytler, it appears that the

Ass of Cutch and the north of Guzrât," remarked Col. Sykes in 1835, "is not found further south in India than Deesa, on the banks of the Bunnas river, in lat. about  $23^{\circ} 30'$ ; nor have I heard of it to the eastward of the  $75^{\circ}$  of longitude on the southern side of the Himalaya. In Cutch and northern Guzrât it frequents the salt deserts and the open plains of the Opur, Jaysulmir, and Bikánir." Again, Masson, in his 'Narrative of a Journey to Kalát' (published in 1843), remarks that "the Ghor-khur, or 'wild Ass,' was formerly to be found on the Dasht Gúrân, and in Ghurgh'ina, but has disappeared of late years. It is still occasionally seen about Khárân. It also ranges the plain of Dálbanding, on the road from Núshké to Jálk. South-easterly of Kalát, it is said to be found on the Pât of Shikárpúr, between Tambú and Rojân."

To the west of the range of the Ghor-khur lies that of *Asinus hemippus*, or true *Hemionus* of ancient writers,—the particular species apostrophised in the book of Job, and, again, that noticed by Xenophon. There is a recent account of it by Dr. A. H. Layard, in 'Nineveh and its Remains' (p. 324). Returning from the Sinjar, he was riding through the desert to Tel Afer, and there he mistook a troop of them for a body of horse, with the Bedouin riders concealed! "The reader will remember," he adds, "that Xenophon mentions these beautiful animals, which he must have seen during his march over these very plains. He faithfully describes the country, and the quadrupeds and birds that inhabit it, as they are to this day, except that the Ostrich is not now to be found so far north\*. 'The country,'

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Bikánir herd consists at most of 150 individuals, which frequent an oasis a little elevated above the surrounding desert, and commanding an extensive view around, the animals being exceedingly shy, and making off on discerning an object of suspicion, however distant. There is a low range of hills, several miles off, in which is a watercourse, dry during the hot season; but at the head of this, about a mile into the interior of the hills, there is a perpetual spring, to which the Ghor-khurs resort to drink during the night, maintaining the most vigilant caution. Once only in the year, when the foals are young, a party of five or six native hunters, mounted on hardy Sindh mares, chase down as many foals as they can succeed in tiring, which lie down when utterly fatigued, and suffer themselves to be bound and carried off. In general, they refuse sustenance at first; and about one-third only of those taken are reared, but these command high prices and find a ready sale with the native princes. The profits are shared by the party, who do not attempt a second chase in the same year, lest they should scare the herd from the district, as these men regard the sale of a few Ghor-khurs annually as a regular source of subsistence.

\* According to Chesney, Ostriches are still "found in the great Syrian Desert, especially in the plain extending from the Haouran towards Jebel Shammar and Nedja; some of them are found in the Haouran itself, and a few are taken almost every year even within two days' journey of Damascus," &c. (Journal of the Euphrates Expedition, i. 558.) It is well

says he, 'was a plain throughout as even as the sea, and full of wormwood; if any other kind of shrubs or reeds grew there, they had all an aromatic smell; but no trees appeared. Of wild creatures, the most numerous were wild Asses, and not a few Ostriches, besides Bustards and Red Deer (Gazelles), which our horsemen sometimes chased. The Asses, when they were pursued, having gained ground on the horses, stood still (for they exceeded them much in speed); and when these came up with them, they did the same thing again; so that our horsemen could take them by no other means than by dividing themselves into relays, and succeeding one another in the chase. The flesh of those that were taken was like that of Red Deer, but more tender.' (Anab. lib. i. c. 5.) In fleetness," continues Dr. Layard, "they equal the Gazelle; and to overtake them is a feat which only one or two of the most celebrated mares have been known to accomplish. The Arabs sometimes catch the foals during the spring, and bring them up with milk in their tents. They are of a light fawn-colour, almost pink. The Arabs still eat their flesh." This will of course be the animal seen by Mr. Ainsworth at the foot of Taurus, and observed by him among the lower hills\*.

It cannot be doubted that this *Asinus hemippus* is the Mesopotamian and Arabian "wild Horse" of Col. Chesney, as distinguished from his "wild Ass" of the southern deserts of Arabia. In Mesopotamia, this author remarks, "we did not obtain a single specimen, although the Arabs engaged to bring one; they brought a skin, however, of a light brown colour, without stripes, and having a mane [! dark streak?] all along its back. This is more probably the wild Horse."! Again, treating on the animals of Arabia, he remarks: "The wild Horse, the wild Dog [*Lycaon pictus*?], and a kind of wild Cow [*Oryx beatrix*, Gray?] inhabit the country adjoining the district of Joff, between Tolink Sanou and Kedrush; and to the south of these places the wild Ass [*Asinus vulgaris*?] is found in great numbers. The Sherarát Arabs hunt them, and eat their flesh, but not before strangers." Elsewhere he remarks that "the Ass is

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known that Ostriches commonly accompany, at the present day, the troops of Quaggas and Dauws in South Africa.

The remnant of the Ostrich race in Syria requires close examination. From some eggs in Major Tytler's possession, I am strongly inclined to suspect the existence of a second species of Ostrich. These eggs are smaller than the ordinary Ostrich egg, and have a much smoother and more polished surface, with the pores scarcely perceptible. In the ordinary Ostrich egg the pores are particularly conspicuous.

Ostrich feathers, wheresoever obtained, are numerous among the Kurds, who adorn their spears with them.

\* Travels in Assyria, Babylonia, and Chaldea, p. 3.

probably the original animal of its kind [i. e. *species* domesticated] in the country; for it is first mentioned in connexion with this part of the world (Gen. xii. 16; Exod. iv. 20), and it was afterwards considered as a royal animal\*." Here at least two species are indicated, which are likely to be the *Asinus hemippus* and the genuine *A. vulgaris* in its aboriginally wild state; and the wild Asses of the island of Socotra may be presumed to be no other than the latter. They are noticed by the late Lieut. Wellsted, R.N., who remarks, "Amidst the hills over Tamarida, and upon the plain contiguous to it, there are a great number of Asses, which were described to me as different from the domestic Ass; but, after repeated opportunities of observing them, I could find no reason for such a distinction. The introduction of Camels," he remarks, "having superseded the necessity of employing them as beasts of burden, they are permitted to stray where they please, and now wander about in troops of ten or twelve, evincing little fear unless approached very near, when they dart away with much rapidity." It is more likely that they are truly aboriginal.

The genuine wild Ass would, however, appear to be chiefly an inhabitant of North-east Africa, where considerable troops of these animals still exist, as described by ancient authors; and, being of prehistorical antiquity, it does not appear upon what grounds the late Prince of Canino pronounced them to be the descendants of domestic Donkeys, like those (for certain) in the hotter parts only of America; for it may be remarked that it is only in a hot climate that the Ass has returned to wildness †, and the domestic Ass is said to thrive only in a warm climate, and to be reared with difficulty even in Norway. To this subject, however, I propose to return in the sequel.

Whether or not inhabiting the southern parts of the peninsula of Arabia (which our friends at Aden should endeavour to ascer-

\* Col. C. H. Smith remarks that the Ass is "repeatedly mentioned in the Pentateuch before the Horse is noticed,—as in the sacrifice of Abraham, in his visit to Egypt, where he received presents from Abimelech, and in the spoils of Shechem—where Asses are mentioned with other cattle, but the Horse is not mentioned." The Horse is supposed to have been introduced into Egypt by the Hyksos. In Assyria it was reclaimed at the period of the oldest monuments, as abundantly demonstrated, by the discoveries of Layard and others, since Col. Smith wrote.

† Azara notices, of those which have gone wild in South America, and especially about Santa Fé de la Vera Cruz—where he states that the increasing population was fast destroying them (and may have done so by this time)—that those which he saw "appeared to be somewhat larger than the domestic Asses of Paraguay, but smaller than the common Asses of Spain; nor does that large race," he adds, "which is there used for the breeding of mules, exist in these parts. They also appear to have larger and stiffer ears than in my native country."

tain), and also the island of Socotra, it is quite certain\* that great troops of wild Asses, properly so-called, exist not only in the sandy deserts, but upon the mountains of North-east Africa; and it appears that a specimen was not long ago added to the Paris Museum, and was there designated "l'Onagre d'Abyssinie." It was presented by M. Degoutin, French consul at Massoua, and (remarks Prof. Isidore St.-Hilaire) "est certainement un Ane sauvage." It belonged, he tells us, to one of those troops which wander about the deserts of North-east Africa, the existence of which was long ago indicated by Ælian, and which are mentioned also by Leo Africanus in the sixteenth century, and by Marmol in the eighteenth century.

"The wild Ass," remarks the latter author, "is grey. There are a number of them in the deserts of Lybia, Numidia, and the neighbouring countries. Their pace is so fleet that only a barb can come up with them. In our days," continues M. St.-Hilaire, "these troops have been met with in various localities by different travellers—among others, by M. Caillaud, in Nubia; and to all the testimony already published may be added 'trois documents inédits,' respectively by M. Botta (formerly travelling naturalist for the Paris Museum, and now consul at Jerusalem), by M. Trémaux (architect), and by M. Gouzzillot (Coptic Patriarch in Abyssinia).

"The first observed, in Sennaar, a multitude of wild Asses in troops, which were very distinct, according to the spoils obtained, from other animals designated wild Horses [*A. hemippus*?], which inhabit the opposite coast of the Red Sea, in Arabia. The second, in 1848, remarked them in the desert of Naga, in Nubia; their coat was of a palish grey, and the ears were longer than those of the *Hemione* [*A. hemippus*?], but shorter than in the tame Ass[?]. Lastly, M. Gouzzillot, who passed six years in Abyssinia, has assured us of the existence of Onagers in countless herds on the mountains."

These are of course the wild Asses noticed by Col. C. Hamilton Smith, as occurring "on the Nile, above the cataracts; and abundant on the upland plains, between the table-hills below Gous Regun and the Baber-el-Abiad, in Atbara. (*Vide* 'Voyage on the Baber-el-Abiad,' by Adolph Linaud; and Hoskins's 'Travels in Ethiopia.')

According, also, to Sir J. Gardner Wilkinson, they are "common in the districts of the Thebaïd †." Hoskins met with them in the small desert immediately below the fifth cataract. "This desert," he remarks, "is sandy, with quartz and flinty slate disseminated. We saw for the first time three wild Asses, which had been browsing among the acacias near the Nile. There are great numbers of them in the coun-

\* Journ. Roy. Geogr. Soc. 1835, p. 202.

† Domestic Manners of the Ancient Egyptians, iii. 21.

try; but the peasants very seldom succeed in catching or destroying them. A mixed breed [!] is sometimes seen in the villages. From the description of the Arabs, I conceive that the Zebra [*A. Burchellii*] also exists in these deserts. The Nile Ass seems larger than the common one; but we were at too great a distance to observe them particularly. The peasants seldom chase them, but, with a good horse, it is not very difficult\*.”

Both “wild Asses” and “Zebras” are noticed by Mr. W. C. Kirk, in his ‘Report on the Route from Tajurra to Ankobar †.’ Rüppell has determined this northern Zebra to be the *A. Burchellii*, or Dauw of the Cape colonists; the *Equus zebra* of Burchell, as distinguished from his *E. montanus*; and undoubtedly the true *Hippotigris* of the ancients, if not also the original “Zebra” of Pigafetta, from Congo ‡,—the *wild Paard* of the Dutch colonists, or “Mountain Zebra” of Burchell, being the *Equus* or *Asinus zebra* of modern technical nomenclature. This I mention because the French zoologists, from Cuvier to M. Isidore St.-Hilaire§, persist in the mistake of identifying the “Zèbre de montagne” with the Dauw or *A. Burchellii*.

Bruce notices “Zebras” as being “found in Abyssinia only in the south-west extremity of Kuora amid the Shangalla and Galla, in Narea and Caff, and in the mountains of Dyre and Tegla, and thence to the southward.” “Wild Asses, too,” he remarks, “I have frequently seen alive, but never dead: in neck, head, face, and tail, very like ours, *only their skins are streaked, not spotted!*” Perhaps he alludes to occasional bars on the limbs, like the wavy lines on those of the Ghor-khur, which Bell seems also to refer to. The wild Ass of North Africa is not mentioned in Dr. Barth’s work; but at the Meeting of the British Association for 1858, M. R. Schlagintweit made some remarks relative to the Ghor-khur (as reported in the ‘Athenæum’), and stated that Dr. Barth had lately told him that, according to the description which he (M. R. Schlagintweit) had given him, “he thinks the Asses which he saw in Africa identical with the Ghor-khurs of Sindh and Beluchistan.” This can hardly be the case. And does the following notice refer to the ordinary wild Ass of North-east Africa? I very strongly suspect otherwise. Col. C. H. Smith remarks: “We have seen a pair of these animals brought from Cáiro; they were equal in size to an ordinary mule, neatly if not elegantly formed, *white* in

\* Travels in Ethiopia, p. 41.

† Journ. Roy. Geogr. Soc. xii. 234; and for another notice of an African wild Ass, *ibid.* x. 461. In the Narrative of Lander’s expedition (p. 571) a “wild Ass” is mentioned, whatever this may refer to.

‡ Col. C. H. Smith considers this northern “Zebra” to be distinct, and styles it *Hippotigris antiquorum*, but, I think, on very insufficient evidence.

§ Comptes Rendus, 1855, p. 1215.

colour, but silvery-grey on the ridge of the back and nose, with the forehead, neck, and sides of a beautiful pale ash with a tinge of purple; the mane, tail, and cruciform streak black\*.”

These I take to be choice specimens of the fine Levantine breed of domestic Asses, such as are often represented in antique Egyptian paintings, and always with the black crucial mark. From the remotest times it seems that two races of domestic Asses were known in Egypt, and both are represented in the old paintings. In modern times, Russell (in his ‘Natural History of Aleppo,’ p. 58) remarks that the Levantine nations have two principal breeds of Asses: “one very large, with remarkably long ears; the other small, and much like ours in England.” Chardin, again, tells us that there are two races of the domestic Ass in Persia: “Les Anes du pais, qui sont lents et pesans, comme les Anes de nos pais, dont ils ne se servent qu’à porter des fardeaux; et une race d’Anes d’Arabie, qui sont de fort jolies bêtes, et les premiers Anes du monde. Ils ont le poil poli, la tête haute, les pieds légers, les levant avec action en marchant. L’on ne s’en sert que pour montures: les selles qu’on leur met sont comme des bâts ronds, et plats par dessus, faites de drap ou de tapisserie, avec les étriers et le harnois. On s’assied dessus plus vers la croupe que vers le cou. On met à plusieurs des harnois tout argent, tant le maître est content de la légèreté et de la douceur de leur allure. Il y en a du prix de quatre-cens francs, et l’on n’en sauroit avoir d’un peu bons à moins de vingt-cinq pistoles. On les panse comme les chevaux. Les ecclésiastiques qui ne sont pas encore dans les charges, ou dans les grands bénéfices, affectent à aller montés sur les Anes.” He then proceeds to explain how these fine Asses are taught to amble.

The large and small races of Levantine Asses may be said to bear somewhat of the same mutual relation as Horses and Ponies. The small kind only have become domesticated in Northern Europe; and we trace them southward into Dârfur, where they are thus described in Mr. G. Brown’s ‘Travels’ in that country (1799):—“The Ass here is of the same appearance and of the same indocile nature as that of Great Britain. The only good ones are what the Jelahs bring with them from Egypt. Yet the animal is much used for riding; indeed, few persons mount a Horse but the military and those who are in immediate attendance at court. An Egyptian Ass fetches from the value of one to that of three slaves, according to the weight he is able to bear. A slave will purchase three or four of the ordinary breed; and yet the people are not anxious to improve them.”

The Asses of Upper Egypt, according to Sounini, are particularly handsome, but they degenerate towards the Delta.

\* Naturalist’s Library, xii. 312.



Fraser states that the Asses of Omân are the best in Arabia, and individuals of the best breeds sell for extravagant prices\*. In Munro's 'Syria' we are told that the Asses of Damascus stand fourteen hands high; and elsewhere he remarks of one of them, "This Ass was the finest of the kind I ever saw; and the guide asserted that he would sell for more than both his own Horses. With all the animation and tempèr of a Horse, he had the superior qualification of being quicker and easier in his walk. . . . This Ass was found, after a long journey, to refuse his food. On visiting him, after supper, I found that the Ass was not eating, and seemed out of spirits. The guide accounted for this by saying that he was in the habit of living in the house with his master, and that he was alarmed at being left in the dark by himself; wherefore I ordered him into the shed, and his supper being placed near the fire, he fell upon it with great avidity, and had no sooner finished, than he claimed a right to belong to the society, by lying down amongst us, to my great amusement, and the infinite chagrin of my companions, who would have turned him out but for my interference. During the night he became restless, and got up in order to lie down on his other side; in doing which he interfered with the guide's legs, whom I found abusing him for being a pig and an infidel, and threatening to spit on his beard."

In Irwin's 'Memoir of Afghánistán,' we are informed that "the Ass gradually improves as we proceed westward from the Company's provinces. Perhaps the best are those from the west of Khorassán; but even these are much inferior to the Arabian or the Spanish. Asses are imported from Kábul into Bokhára and the north-west of Turkistán." Buckingham tells us that "one of the peculiarities of Bághdád is its race of white Asses, which, as at Cáiro, are saddled and bridled for the conveyance of passengers from one part of the town to another; and these are equally as large and spirited as the Egyptian Ass, and have as easy and speedy a pace. They are frequently spotted over with colours, and otherwise fantastically marked over with red henna-stains."

At Pesháwar, tame Asses of the large race are known as "Bokhára Asses"; and Sir A. Burnes, writing on the domestic animals of Bokhára, remarks, "None are more useful than the Ass; the breed is large and sturdy, and they are much used, both for saddle and bridle. There is no objection to riding them, as in India. There are no mules, from a religious prejudice

\* I have somewhere read that the pedigrees of the best Asses of Omân are kept with as much care as those of the choicest breeds of horses in the same province.

against them." His brother, Dr. A. Burnes, also remarks that "Asses, much larger than those of India, are to be met with in Sindh, where the Ass attains the development which it is known to enjoy only within a very limited geographical distribution." But are not these fine Asses chiefly imported into Sindh, rather than bred there? albeit the climate should well agree with them. A correspondent informs me that "what are called Bokhára Asses are frequently brought to Pesháwar. They are very large and strong, and are both of the usual colour and white. Of the latter a friend of mine had three, viz. a male and female, and their offspring. There was one of the usual colour, larger than either of the two white ones, and I have some idea that I had heard it said that he was over thirteen hands high; but of this I will not be positive, having paid no great attention. I think they were not at all uncommon at Pesháwar when the Káfilas were getting through; and, as far as I remember, the price asked for one was from 80 to 150 rupees. As for where they came from, that I don't know in particular, except that they came with the Káfilas of horses from the north. The dark one I have mentioned was an extremely fine specimen; but my friend got him for (I think) 80 rupees, to use as a baggage-donkey, and, as far as I recollect, he was sold cheap because he declined to act as a stallion to *mares*, and was therefore useless for the purpose of begetting mules." It would appear, therefore, that these fine Asses are foreign to Sindh, and are mostly brought for the purpose of procreating mules; in which case she-Asses of the kind are probably scarcely known there, and consequently the race can hardly be said to be introduced into the country. It would nevertheless appear to be completely naturalized in Bokhára.

These superb Asses are bred and duly estimated in America; and it is time that they were introduced into the Australian colonies, if not also those of South Africa. In Capt. Marryatt's well-known 'Diary in America,' the novelist describes a cattle-show which he attended in Lexington, Kentucky. The fourth day of the show was reserved for the exhibition of Asses. "Several were shown standing fifteen hands high, with head and ears in proportion: the breed has been obtained from the Maltese Ass, crossed by those of Spain and the south of France. Those imported seldom average more than fourteen hands high; but the Kentuckians, by great attention and care, have raised them up to fifteen hands, and sometimes even to sixteen. The prices paid for these splendid animals (for such they really are) will prove how much they were in request. One male, of great celebrity, sold for 5000 dollars (upwards of £1000 sterling). A half-share of another male was sold for 2500 dollars. At the

show I asked the price of a very beautiful female Ass only one year old; the owner said that he could have 1000 dollars for her, but that he had refused that sum. For a three-year-old male, shown during the exhibition, 3000 dollars (more than £600) were refused. The fact is that mule-breeding is so lucrative, that there is no price which a very large donkey will not command."

With reference to the current statement that the Ass nowhere thrives in a cold climate, it should be remembered that these animals are numerous in Pekin; and that some at least of the Chinese donkeys are fine animals, may be inferred from Dr. Hooker's remark about the Tibetan mules, which he says are often as fine as the Spanish. He "rode one, which had performed a journey from Choombi to Lhassa in fifteen days with a man and load." Nevertheless, as a general rule and irrespective of recent introductions, the finest Asses chiefly inhabit Arabia and the Levantine countries, and the most degenerate are the puny cat-hammed Guddhas of India generally. As Col. Sykes remarks, some of these are scarcely larger than a fine Newfoundland dog; but on what ground Col. C. H. Smith supposed this to be a wild race inhabiting the Dukhun\* it is difficult to imagine. There are small Asses also in Persia, as about Ispahán, which Chardin (as we have seen) denominated the race proper to the country, while he mentions that many of the large kind are imported into Persia from Arabia. It is curious that Aristotle states that in his time there were no Asses in Pontus, Syria, or in the country of the Celts (meaning modern Germany and France), Syria being now so celebrated for the excellence of its breed of them. For many ages previously they are known to have existed in Egypt and Arabia. In short, there seems to be no evidence whatever to bear out the current notion that the domestic Ass originated in northern Asia, but, on the contrary, every reason to infer that it originated in the region where the particular species is still found wild, and where also the finest and least-altered of the domestic races prevail to this day; and that the fact should not have been long ago established is surely somewhat remarkable.

A writer on this animal observes, justly enough, that "the Ass is, properly speaking, a mountain species: his hoofs are long and furnished with extremely sharp rims, leaving a hollow in the centre, by which means he is enabled to tread with more security on the steep and slippery sides of precipices. The hoof of the Horse, on the contrary, is round and nearly flat underneath; and we accordingly find that he is more serviceable in

\* Nat. Libr. "Mammalia," vol. xii. p. 306.

level countries; and, indeed, experience has long since taught that he is altogether unfit for crossing rocky and steep mountains." Hill-ponies may, indeed, be cited as exceptions to a greater or less extent; but the fact is nevertheless true in the main—and hence the breeding of mules in mountainous countries, which should combine the size and strength of one parent-species with the hardihood and sure-footedness of the other. All of the Asinine tribe seem to be quite indifferent to heat, and some at least of them are equally so to cold, as especially exemplified by the Koulans or Ghor-khurs about Lake Aral; and the tame Asses of this country, under the fiercest mid-day sun, may commonly be observed to evince their innate fondness for the parched desert, as strongly as a kid manifests its propensity to clamber rocks, by keeping to the dusty roads, in preference to the pasture, whenever they are not feeding.

Of several species so very nearly akin, in different countries, it is remarkable that only the Ass should have been subjected to servitude (save in a few individual cases at most); but it appears that the experiments which have been systematically carried on, now for several years, by the Acclimatation Society at Paris, have been attended with considerable success in breaking-in Ghor-khurs, which have been bred there for a series of generations, and that these animals are now daily mounted and ridden. Many years ago, the celebrated Sheriff Perkins drove a pair of Quaggas through the streets of London, as I well remember to have witnessed when a child.

The following species of the division *Asinus*, as defined by Gray, are now likely to be generally acknowledged:—

1. *A. Quagga*. The Quagga, from the Cape territories, and scarcely found northward of the Gariep or Orange River; but still in great herds southward, associating with the White-tailed Gnu, as the next does with the Brindled Gnu, and both with Ostriches (as in Xenophon's time the *A. hemippus* did in Mesopotamia). The most Horse-like in structure of any. The *Hippotigris isabellinus* of Col. C. H. Smith is probably founded on a Quagga-foal, perhaps not very exactly represented. Such an animal as this, or as the "Isabelline Zebra" of Levaillant could not have been overlooked by all subsequent explorers of South Africa.

2. *A. Burchellii*, Gray (*Equus zebra* of Burchell). The Dauw, or original *Hippotigris* of the ancients, and also the original Zebra of Pigafetta from Congo; but unknown to Buffon, who regarded the next, or Mountain Zebra, and the Quagga as the two sexes of one species, denominated by him the Zebra (*Hippotigris Burchellii* and *H. antiquorum* of C. H. Smith). Exten-

sively diffused over Africa, even to Abyssinia and to Congo, and southward to the Gariep river\*.

3. *A. zebra* (*Equus montanus*, Burchell). The Zebra of modern nomenclature, or (more distinctively) the Mountain Zebra; Wild Paard (Wild Horse) of the Dutch colonists of South Africa. A thorough mountaineer, and known only to inhabit South Africa. Also the most completely striped of any, down to the very hoofs.

4. *A. vulgaris*, Gray (*E. asinus*, L.). The true *Onager*, *Onagrus*, or aboriginally wild Ass. Indigenous to North-east Africa, if not also to the southern parts of Arabia and the island of Socotra.

5. *A. hemippus* (*E. hemippus*, Is. St.-Hilaire; *E. asinus onager* apud Wagner). The *Hemionus* or *Hemippus* of the ancients. Inhabiting the deserts of Syria, Mesopotamia, and the northern parts of Arabia.

6. *A. onager* (*E. asinus onager*, Pallas). The Koulan or Ghor-khur. Inhabits West Asia, from 48° N. latitude southward to Persia, Beluchistán, and Western India.

7. *A. hemionus* (*E. hemionus*, Pallas; *E. kyang*, Moorcroft; *E. polyodon*, Hodgson). The Dshiggetai or Kyang. Inhabits Tibet, and thence northward through the Gobi Desert into Mongolia and Southern Siberia.

N.B. So far as known for certain, the last two are distinguishable by shades of colour only, and by unimportant differences in the relative extension of different hues and markings. The *A. hamar* of Col. C. H. Smith is rejected, as having been founded on insufficient evidence of the existence of such an animal.

It is highly improbable, also, that other wild asinine species yet remain to be distinguished.

To recapitulate, I have endeavoured in this paper to establish the following novel propositions:—

1. That the true *Onager* and *Hemionus* of ancient writers were unknown to Pallas, who has assigned these names to cognate species or races that were unknown to the Greeks and Romans.

2. That, accordingly, the Koulan of N. Asia is not the true *Onager* or aboriginal wild Ass, but that it is identical with the Indian Ghor-khur.

3. That the true *Onager*, or wild Ass, is not an inhabitant of North Asia, but of North-east Africa and the southern portion of Arabia.

4. That the Koulan and the Dshiggetai or Kyang, instead of being strongly distinguished apart, as has been asserted, bear

\* To this species appertained the "Zebra" lately subjected by Mr. Rarey.

so exceedingly close a resemblance that no decided specific distinction has yet been satisfactorily pointed out, however probable it may be that such distinction may exist.

Why, therefore, the one should be popularly styled a "wild Horse," and the other a "wild Ass," it is difficult to comprehend. Even Pallas terms the Dshiggetai "un Cheval sauvage," though describing it as "ni Cheval ni Ane;" while the other he both designates as the Ass of the steppes and as the "Cheval ou Ane," employing the word "cheval" in its German equivalent evidently in the sense of *equus*. Col. Chesney, as we have seen, terms the Arabian *A. hemippus* a "wild Horse," as distinguished from his wild Ass of South Arabia! The fact is, I apprehend, that the vague application of these names has resulted merely from the colouring.

XXXII.—*Descriptions of new Genera and Species of Tenthredinidæ in the Collection of the British Museum.* By FREDERICK SMITH.

THE collection of Tenthredinidæ contained in the national Museum is perhaps the most extensive in Europe; the species described in the present paper are, in my own opinion, the most remarkable in the various genera to which they belong. The *Hylotoma imperialis* is unrivalled both in size and beauty by any of the species of that extensive genus. The new *Lyda* is the first species which I have seen from the East, and is remarkable for the extreme elongation of the antennæ. The new genus *Derecyrta* is, however, the finest addition to the family. The new species of *Sirex* must acquire additional interest from the fact of its being discovered in the cedars of Lebanon. Having been engaged in the preparation of a Catalogue of the Tenthredinidæ for some time past, and it being obvious that its completion will occupy still a considerable length of time, I have thought it desirable to secure to myself the description of a few of the more remarkable species and genera of this family of insects.

Genus HYLOTOMA, Latr.

*Hylotoma imperialis.*

*H. nitens*, supra purpureo-violacea; capite, thorace abdomineque infra nigro-chalybeis; alis flavo-hyalinis; antennis nigris, opacis.

Female. Length 8 lines. Brilliant purple, with violet tints above, varying in different lights; beneath of a steel blue, very smooth and shining; the antennæ of an opaque black; the wings yellow hyaline, the nervures reddish-yellow.

*Hab.* North China. Robert Fortune Esq.